ABSTRACT

A method and an apparatus are provided for measuring the rate of permeation of a gas or vapour through a test sample using a mass spectrometer as detector.

The gas container containing the test sample is filled with a gas or vapour inside a filling chamber. A pressure-compensating device attached to the gas container alleviates the effect of pressure decrease inside the gas container due to permeation. After transferring the test sample to the investigation chamber the partial pressure of the gas or vapour is detected after permeation through the test sample. After calibration the measured partial pressure is converted into the rate of permeation. The rate of permeation can be studied position-resolved at different locations on the sample. The method can be used to measure permeation through film samples, edges or complete devices.

Suggested drawing: Figure 4